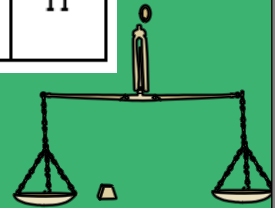
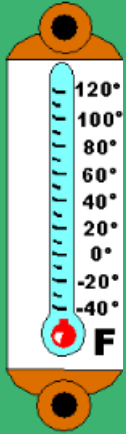


# 1.2 Measuring



Curriculum Outcomes	Related Activities	Page in Text
<ul style="list-style-type: none"> <li>determine accuracy and precision of a measurement</li> <li>demonstrate an understanding of the concerns and issues that pertain to the collection of data</li> </ul>	<ul style="list-style-type: none"> <li>carry out specific measurement activities using an appropriate level of precision</li> </ul>	9
	<ul style="list-style-type: none"> <li>discuss and determine the number of digits students feel confident reading and recording when making the same measurement using scales of different fineness</li> </ul>	9
	<ul style="list-style-type: none"> <li>investigate, through measuring activities, possible inaccuracies that produce different results</li> </ul>	10
	<ul style="list-style-type: none"> <li>relate precision and the number of significant digits for the same measurement</li> </ul>	11
	<ul style="list-style-type: none"> <li>perform measurement calculations and report results with appropriate level of precision and significant digits</li> </ul>	11

## Accuracy

If these shapes are measured multiple times by different people, will everyone find the same measurement?



# Precision

Which ruler will give us a more precise measurement of this shape?



## Notes

**Accuracy:** indicates how close the recorded measurement is to the true value. It is dependent upon the user's skill in using the measuring tool.

**Precision:** is the smallest unit that can be measured with confidence using the measuring tool and is determined by the fineness of the scale on the tool.

### Accuracy

The accuracy of a measurement indicates how close the recorded measurement is to the true value. It depends on the user's skill in using the tool.

When measuring with a ruler, you must start at the 0 mark, and look straight down on the ruler in order to get an accurate measurement.

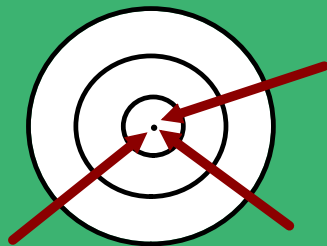
Other factors like temperature, humidity, and the conditions of the tool can also influence accuracy.

### Precision

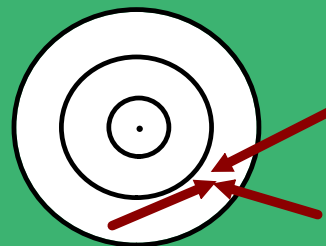
The precision of a measurement is determined by the size of the units that can be measured with confidence using the tool. The smaller the unit, the more accurate the measurement.

## How are accuracy and precision alike and different?

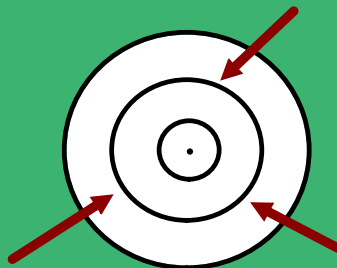
- **Example: Arrows on a target**



Good accuracy  
Good precision



Good precision  
Poor accuracy



Poor precision  
Poor accuracy

### Focus C: Accuracy and Precision

#### Accuracy:

- three different people using same ruler get different answers.

#### Precision:

- greater number of digits increases precision.

#### Classwork:

#### Do Focus Questions Pg.9 #2,3,4

#2. It is important to use the same tool to measure length and width because then when you find area your answer will be as precise as both measurements.

#3. 100.0 tells us that the measurement is EXACTLY 100m, while 100m means that it might have been rounded.

#4. Should the precision of the calculated measurement be considered the same as the least precise measurement???? Explain.